an excitation winding producing a variable magnetic field, a magnetic-flux-guiding main yoke body accommodating the excitation winding and having multiple limbs including a central limb, a winding-free counter-yoke body disposed opposite to the main yoke body, an axial gap formed between the main yoke body and the counter-yoke body, and an armature body provided with at least two permanent magnetic magnet parts arranged axially one behind the other and having opposite magnetization. Each of the at least two magnet parts having a magnet axial extension dimension. The armature body being set in axially oscillating motion by the magnetic field of the excitation winding in the axial gap. Each of the multiple limbs of the main yoke body having a pole surface facing the armature body and defining a pole surface width dimension extending across the axial width of the pole surface. The pole surface width dimension of each of the multiple limbs being substantially the same. Each of the multiple limbs being spaced apart from one another axially by a pole surface spacing dimension. The magnet axial extension dimension of each magnet part being approximately equal to the sum of the pole surface width dimension and the pole surface spacing dimension.

Conventional yokes for linear drive devices have been kinked on a side facing the armature. Such conventional yokes are expensive to produce and it is difficult to arrange the windings in the windows of such conventional yokes.

In stark contrast, an exemplary embodiment of the present invention includes a pole surface width dimension of each of the multiple limbs being substantially the same, each of the multiple limbs being spaced apart from one another axially by a pole surface spacing dimension, the magnet axial extension dimension of each magnet part being approximately equal to the sum of the pole surface width dimension and the pole surface spacing dimension. In this manner, the yoke structure is greatly simplified.

The JP2000-253640 Reference

The Office Action rejects claims 14 and 18-20 under 35 U.S.C. § 102(b) as allegedly being unpatentable over the JP2000-253640 reference. Applicant respectfully traverses this rejection.

None of the applied references teaches or suggests the features of the claimed invention including a pole surface width dimension of each of the multiple limbs being substantially the same, each of the multiple limbs being spaced apart from one another axially by a pole surface spacing dimension, the magnet axial extension dimension of each magnet part being approximately equal to the sum of the pole surface width dimension and the pole surface spacing dimension as recited by independent claim 14. As explained above, this feature is important for simplifying the yoke structure and thereby making it less expensive to manufacture and easier to install the windings.

Indeed, the Office Action does not allege that the JP2000-253640 reference teaches or suggests these features.

Applicant respectfully requests withdrawal of this rejection.

The JP2000-224829 Reference

The Office Action rejects claims 14 and 17-20 under 35 U.S.C. § 102(b) as allegedly being unpatentable over the JP2000-224829 reference. Applicant respectfully traverses this rejection.

None of the applied references teaches or suggests the features of the claimed invention including a pole surface width dimension of each of the multiple limbs being substantially the same, each of the multiple limbs being spaced apart from one another axially by a pole surface spacing dimension, the magnet axial extension dimension of each magnet part being approximately equal to the sum of the pole surface width dimension and the pole surface spacing dimension as recited by independent claim 14. As explained above, this feature is important for simplifying the yoke structure and thereby making it less expensive to manufacture and easier to install the windings.

Indeed, the Office Action does not allege that the JP2000-224829 reference teaches or suggests these features.

Applicant respectfully requests withdrawal of this rejection.

The JP2000-253640 Reference in view of the Huth reference

The Office Action rejects claims 15 and 16 under 35 U.S.C. § 103(a) as allegedly being unpatentable over the JP2000-253640 reference in view of the Huth reference. Applicant respectfully traverses this rejection.

None of the applied references teaches or suggests the features of the claimed invention including a pole surface width dimension of each of the multiple limbs being substantially the same, each of the multiple limbs being spaced apart from one another axially by a pole surface spacing dimension, the magnet axial extension dimension of each magnet part being approximately equal to the sum of the pole surface width dimension and the pole surface spacing dimension as recited by independent claim 14. This feature is important for simplifying the yoke structure and thereby making it less expensive to manufacture and easier to install the windings.

As explained above, the JP2000-253640 reference does not teach or suggest these features.

The Huth reference does not remedy the deficiencies of the JP2000-253640 reference.

Indeed, the Office Action does not allege that the Huth reference remedies these deficiencies of the JP2000-253640 reference.

Applicant respectfully requests withdrawal of this rejection.

The JP2000-253640 Reference in view of the McGill et al. reference

The Office Action rejects claims 21 under 35 U.S.C. § 103(a) as allegedly being unpatentable over the JP2000-253640 reference in view of the McGill et al. reference. Applicant respectfully traverses this rejection.

None of the applied references teaches or suggests the features of the claimed invention including a pole surface width dimension of each of the multiple limbs being substantially the same, each of the multiple limbs being spaced apart from one another axially by a pole surface spacing dimension, the magnet axial extension dimension of each magnet part being approximately equal to the sum of the pole surface width dimension and the pole surface spacing dimension as recited by independent claim 14. This feature is important for simplifying the yoke structure and thereby making it less expensive to manufacture and easier to install the windings.

As explained above, the JP2000-253640 reference does not teach or suggest these features.

The McGill et al. reference does not remedy the deficiencies of the JP2000-253640 reference.

Indeed, the Office Action does not allege that the McGill et al. reference remedies these deficiencies of the JP2000-253640 reference.

Applicant respectfully requests withdrawal of this rejection.